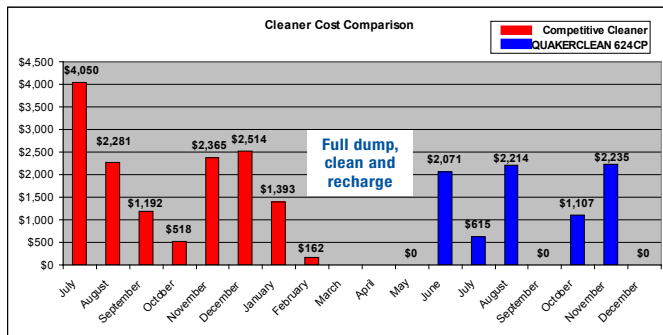


Challenges

A major automotive manufacturer was interested in reducing the annual cleaner and operating costs of its 12,000 gallon central wash system. This system, which feeds all in-process and final washers in the department cleaning 319 aluminum 3.7L heads, had historically used a competitive cleaner. Quaker approached the manufacturer, suggesting they switch from their current cleaner to QUAKERCLEAN® 624 CP. Quaker wanted to show by switching to QUAKERCLEAN® 624 CP the manufacturer would be able to achieve \$4,000 in annual cost savings.

Providing Solutions

Below is a comparison of the competitor's cleaner costs and the cost of QUAKERCLEAN® 624 CP over an 18 month period and a comparison of the baseline data and the results after the manufacturer decided to perform a full dump, clean and re-charge of their 12,000 gallon central system with QUAKERCLEAN® 624 CP.



	Competitive Cleaner	QUAKERCLEAN® 624 CP
Average Cleaner Cost	\$1,810/month	\$1,030/month

The conversion to QUAKERCLEAN® 624 CP has resulted in an annual cost savings to the manufacturer of \$9,353.

- \$7,953 of the cost savings is due to a cost/gallon decrease
- \$1,400 is due to decreased system usage

Product Description

QUAKERCLEAN® 624 CP is a dual purpose, mild alkaline liquid that simultaneously cleans and protects metal surfaces in a single processing step. This product is designed for ferrous (steel and cast iron) alloys and non-ferrous (aluminum) alloys. QUAKERCLEAN® 624 CP will not foam and works extremely well in deburring operations with spray pressures in excess of 2,500 psi (172 BAR).

QUAKERCLEAN® 624 CP does not contain any strong acids, strong alkalis, nonylphenol ethoxylates (NPEs), solvents, and ozone depleting compounds, silicates, phosphates or chelating agents. No VOC at recommended use concentration and temperature. QUAKERCLEAN® 624 CP has a mild operating pH and is non-flammable and non-combustible. Effective cleaning at ambient temperatures reduces energy costs.

Process & Equipment

Part:	3.7 L Heads
Part Alloy:	319 aluminum
System Size:	12,000 gallon central system
Water Hardness:	130 ppm
Concentration:	2 - 4%
Header Pressure:	85 psig
Washer Pressure:	85 psig and 1,500 psig
Filtration System:	Vacuum filter with 2.5 oz polypropylene paper media
Specific Operation:	Aluminum head cleaning

Product & Process Expertise

Metalworking lubricants represent a very minor part of the costs in a metalworking process, typically less than 1%. This case illustrates the importance of correct fluid selection. The impact of the fluid can be a multiple of its costs, making the price of a metalworking fluid insignificant. That is why Quaker focuses on developing fluids with the highest performance without compromise, fluids that sharpen your competitive edge.

Quaker Chemical Management Services (QCMSSM) offers a full range of process expertise and support. Quaker programs are ISO 9001 certified and have received numerous supplier certifications and awards for excellence. QCMSSM provides a disciplined approach to controlling the acquisition, delivery, storage, application and disposal of process fluids.

Quaker Management Services provides:

- **Inventory Management**
- **Process Monitoring**
- **Chemical Usage Reporting**
- **Chemical Sampling**
- **Knowledge Sharing**
- **Fluid Recycling**
- **Waste Management**
- **Technical Support**
- **Engineering Services**